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THE DAPP-BQ IN THE NETHERLANDS: FACTOR STRUCTURE AND RELATIONSHIP WITH BASIC PERSONALITY DIMENSIONS

Dirk van Kampen, PhD

After discarding eight items in the Dutch translation of Livesley's DAPP-BQ that showed item-total correlations < 0.20 in a sample of 223 normal subjects, Cronbach's α coefficients were calculated for the remaining items in the 18 scales of this instrument. The 'Dutch' α coefficients proved to be satisfactory. Furthermore, the Dutch DAPP-BQ scales were factor analyzed, retaining four factors. Three of these factors proved to be identical (Emotional Dysregulation and Dissocial) or nearly identical (Compulsivity) to the Canadian factors. However, the original factor Inhibition was not the same as the remaining Dutch factor Intimacy Problems. In a sample of 115 students, the estimated scores for the Dutch Dimensional Assessment of Personality Pathology-Basic Questionnaire (DAPP-BQ) factors were correlated with the scales of Van Kampen's Four-Dimensional Personality Test. As expected, Emotional Dysregulation was found to correlate with Neuroticism, Dissocial with Insensitivity, and Compulsivity with Orderliness. The Intimacy Problems factor proved to be negatively correlated with Extraversion. The results obtained are embedded in the context of the evidence favoring a dimensional model of personality disorder. Furthermore, Livesley's proposal that separate diagnostic criteria for the existence of a personality disorder must be formulated to supplement the assessment by means of the DAPP-BQ is critically discussed.

In a clarifying article about the classification of personality disorders in DSM-III (APA, 1980) and DSM-III-R (American Psychiatric Association [APA], 1987), Livesley, Schroeder, Jackson, & Jang (1994) critically discuss three basic assumptions that underlie this classification. First, the assumption is criticized that normal and abnormal personality belong to qualitatively different domains, implying that personality disorder cannot be considered a variant of normal personality. Their second criticism, which is

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related to the first one, refers to the notion that distinct categories of personality disorder can be distinguished, each with their own defining set of diagnostic criteria. In the third place, the authors challenge the assumption that mental state disorders and personality disorders must be located on separate axes (Axis I and Axis II), apparently signifying that there are two distinct types of mental disorder.

In addressing the first two assumptions, the authors list four different kinds of discontinuity that may be distinguished when testing empirically the appropriateness of a categorical model of personality disorder above a dimensional model: (a) the discontinuity shows itself in either bimodality or a point of rarity in the distribution of phenotypic personality disorder features (Kendell, 1975); (b) the discontinuity shows itself in a threshold effect; the disorder, although associated with a continuous trait, occurs only when the position on that trait exceeds a certain magnitude; (c) the traits delineating personality disorder are continuous but their structural relationships are different in personality-disordered and non-personality-disordered populations; and (d) the continuity at the observed level is congruent with discontinuity at a more distant, for instance, genetic, level (Meehl, 1994).

With the possible exception of the last-mentioned kind of discontinuity (but see Livesley et al.'s (1994) comments on the purpose of classificatory schemes in psychiatry), the empirical evidence seems to favor a dimensional model. In a study by Livesley, Jackson, & Schroeder (1992), for instance, the scores in a combined sample of 158 patients with a primary diagnosis of personality disorder and 274 general population subjects on 100 scales that measure prototypical and less prototypical qualities in terms of the degree they represent DSM-III and DSM-III-R personality disorder diagnoses did not show any evidence of bimodality or points of rarity (for similar results, see Zimmerman & Coryell, 1990). Of equal importance are several studies that indicate that personality disorders or distinct features of them can be easily accommodated by certain dimensional models of normal personality (Widiger, Verheul, & Van den Brink, 1999). In particular, the five-factor model (FFM) has been found to be rather powerful in this respect. For instance, in a study conducted by Trull (1992), significant correlations and multiple correlations were found in a sample of 54 psychiatric outpatients between the domain scores Neuroticism (positive), Agreeableness (negative), and Extraversion (negative) of the Neo-Personality Inventory (NEO-PI) (Costa & McCrae, 1985), and several dimensional scores reflecting the number of DSM-III-R criteria for each personality disorder.

Of special relevance with respect to the current investigation is a study by Schroeder, Wormworth, & Livesley (1992), in which both the NEO-PI and 16 of the 18 personality disorder scales of the Dimensional Assessment of Personality Pathology - Basic Questionnaire (DAPP-BQ) were administered to a sample of 300 general population subjects. One great advantage of the DAPP-BQ in comparison with a direct assessment of the DSM-III, DSM-III-R or DSM-IV (APA, 1994) personality disorder categories is that the DAPP-BQ measures separate and homogenous constructs, whereas the measurement of the DSM categories may refer to multiple personality traits (Widiger, Trull, Clarkin, Sanderson, & Costa, 1994). It is, therefore, interesting to note that the study by Schroeder et al. (1992) not only demonstrated that a

joint factor analysis of the NEO-PI and the DAPP-BQ scales yielded an interpretable five-factor solution in which four of these factors were highly loaded by the FFM dimensions Neuroticism, Extraversion, Agreeableness, and Conscientiousness, but also that the multiple correlations between the dependent DAPP-BQ scales and the FFM predictor variables were often of a substantial level, with the values for the 16 scales averaging approximately $R = 0.65$.

With respect to the second kind of discontinuity, a study by Nakao, Gunderson, Phillips, Tanaka, Yorifuji, Takaishi, & Nashimura (1992) is of interest. In this study the authors found that functional impairment, measured by the DSM-III-R Global Assessment of Functioning Scale (GAF), followed a continuous distribution with lower scores (indicating impairment) for patients who met thresholds for personality disorder than it was for patients without a personality disorder diagnosis. Moreover, the GAF scale correlated -0.6 with the total number of Axis II diagnostic criteria. As this scale seems to indicate a central feature in the DSM-III-R definition of what constitutes a personality disorder (APA, 1987, p. 335) or, indeed, any kind of mental disorder (p. xxii), these findings are at variance with the notion that a personality disorder may only arise when a certain threshold value is exceeded.

The main purpose of the aforementioned study by Livesley et al. (1992) was to test the third kind of discontinuity. As already indicated, a categorical model would predict (Eysenck, 1987) that different patterns of structural relationship among personality disorder traits should be found in samples that vary on the presence of personality disorder. To test this hypothesis, a self-report measure to assess each of the aforementioned 100 prototypical and less prototypical personality disorder features was subjected to a principal components analysis both in the sample of 158 personality-disordered patients and in the sample of 274 normal subjects. In both groups, a 15-component solution seemed best to account for the data. After conducting an orthogonal Procrustes rotation of the general population matrix to the varimax-rotated, 15-factor matrix in the clinical group, factor congruence coefficients (Tucker, 1951) were calculated for parallel factors to see whether the structural relationships among the traits in both groups proved to be similar. According to the authors, the degree of similarity observed between the two factor structures was of such a magnitude that the personality pathology in the clinical sample appeared to differ only in quantity rather than quality from that in the normal group. However, of the 15 congruence coefficients, 5 were found to be less than 0.80, the minimum figure reported in the literature (Haven & Ten Berge, 1977) to indicate the situation in which two factors usually will be considered equal. According to De Zeeuw (1978), even a minimum figure of 0.90 must be applied. Although we may conclude, therefore, that the degree of structural invariance reported by Livesley et al. (1992) seems to be somewhat overrated, a final conclusion seems not possible, given that the factor analysis in the clinical group was based on a patients-to-variables ratio that was clearly too low (Barrett & Kline, 1981).

Given the evidence obtained in the research mentioned above, the conclusion seems inevitable that a satisfactory classificatory scheme of personality disorders must follow a dimensional model of phenotypic personality disorder.

der traits that must be shown to be related to normal personality traits. Several schemes involving such traits have been proposed (Clark, 1993; Deary, Peter, Austin, & Gibson, 1998; Harkness & McNulty, 1994; Livesley, Jang, & Vernon, 1998; Presly & Walton, 1973; Tyrer & Alexander, 1979). Fortunately, these classificatory schemes have been found to converge substantially, especially with respect to the higher-order factors involved (Austin & Deary, 2000; Clark, Livesley, Schroeder, & Irish, 1996; Trull, Ueda, Costa, & McCrae, 1995). In this report, we will discuss the scheme presented by Livesley and colleagues that resulted in the construction of the DAPP-BQ.

To arrive at a set of personality traits that provide a representative sampling of the overall domain of personality disorder, Livesley (1986) started with an investigation in which trait and behavioral items believed to be potentially associated with the 11 DSM-III Axis II personality disorders were rated by a sample of 938 psychiatrists for the degree to which they were prototypical of each disorder. However, stating in a subsequent article (Livesley, 1987) that the classification of personality disorders must emphasize behavioral regularities and consistencies that distinguish patients with different disorders, Livesley laid more stress on the trait concept as the basic unit of definition and description. Hence, in this paper, Livesley used only the personality trait ratings previously obtained in a subsample of 473 psychiatrists to see which features must be considered most prototypical for each disorder. Having identified these features, the prototype was reduced to fewer categories by grouping together those traits that appeared to be highly similar into behavioral dimensions. In doing this, the trait with the highest prototypicality rating for a certain disorder was used to establish the first dimension and the other traits were included in this dimension if appropriate. After all prototypical traits were classified in this manner, the resulting dimensions were also examined across disorders, changing their definitions to enhance distinctiveness if necessary. In this investigation, 79 dimensions were required to account for all traits. In the next stage of the research conducted by Livesley (Livesley, Jackson & Schroeder, 1989), multiple-item, self-report scales were developed for the 79 dimensions, after which the psychometric properties of the scales were evaluated in two general population samples. During the course of scale development, the number of scales increased to 100 because some scales had to be split into separate scales, as they were found to be factorially complex. Other scales were added to accommodate the instrument to the diagnostic criteria changes made in DSM-III-R. Of the 100 dimensions to be measured by the self-rating scales, 79 refer to highly prototypical features; the remaining 21 dimensions are related to less prototypical qualities.

The DAPP-BQ itself rests on the aforementioned study by Livesley et al. (1992), in which the 100 scales were subjected to a principal components analysis, both in the sample of 158 patients with a primary diagnosis of personality disorder and in the sample of 274 volunteer subjects drawn from the general population. As already indicated, in both groups 15 components were extracted. In comparing the two solutions, clusters of scales were identified that loaded together in both analyses (Schroeder et al., 1992). As might be expected from the situation that at least some factors did not show high similarity across the two samples (see above), the content of these clus-

ters was generally found to be narrower in scope than the content of the factors extracted in both groups. Nevertheless, 14 clusters could be identified that were clearly related to 14 of 15 factors. In terms of the labels assigned later to the dimensions of the DAPP-BQ, these 14 clusters are denoted Submissiveness, Cognitive Distortion, Affective Lability, Stimulus Seeking, Compulsivity, Restricted Expression, Callousness, Oppositionality, Intimacy Problems, Rejection, Conduct Problems, Social Avoidance, Narcissism, and Insecure Attachment. One further factor—the first one extracted in both samples—gave rise to two clusters, Anxiousness and Identity Problems, because of the broad content of that factor. Two other clusters, Suspiciousness and Self-Harm, although not clearly emerging as factors in the two groups, were finally added to the list, as these clusters were considered clinically important features of some Axis II diagnoses.

Beside the fact (see above) that the DAPP-BQ and the NEO-PI were factor analyzed together, principal components analyses were also performed with the DAPP-BQ scales themselves. In some analyses, the dimensions Self-Harm and Cognitive Distortion (Schroeder, Wormworth & Livesley, 1994) or only Self-Harm (Livesley et al., 1998) were not included because of their low item endorsement rates in general population subjects. However, a principal components analysis with oblimin rotation conducted over all 18 scales or over a reduced set of 17 scales, omitting Self-Harm, in a sample of 942 normal subjects—the data were kindly made available to the author by Jang (Personal communication, February 8, 2000) — resulted in almost the same four higher-order dimensions. These factors, which accounted for approximately 70% of the total variance, could be interpreted, similar to the factors found in other general population samples: (a) Emotional Dysregulation (with structure matrix loadings greater than 0.60 in both the full and in the reduced analysis for Submissiveness, Cognitive Distortion, Identity Problems, Affective Lability, Oppositionality, Anxiousness, Suspiciousness, Social Avoidance, Narcissism, and Insecure Attachment); (b) Dissocial (marked by Stimulus Seeking, Callousness, Rejection, Conduct Problems, and Suspiciousness); (c) Inhibition (with loadings from Restricted Expression and Intimacy Problems); and (d) Compulsivity (loaded by Compulsivity).¹ It is clear that especially the first factor mentioned is very broad, which seems to be in agreement with the fact that comorbidity studies have found substantial covariation among personality disorder diagnoses (Widiger et al., 1991). However, the degree of comorbidity varies greatly across diagnoses, with borderline and paranoid personality disorder (see the related DAPP-BQ scales loading on Factor 1) indeed having the highest, and compulsive personality disorder (Factor 4) the lowest rate of comorbidity. The same four factors were also found in a clinical sample of 656 patients with a primary diagnosis of

1. It seems difficult to understand why Livesley and colleagues in their interpretation of oblimin-rotated factors always depend on the loadings in the pattern matrix instead of the loadings in the structure matrix, for only the structure matrix contains loadings directly reflecting the correlations of the variables with the factors, whereas the pattern loadings can only be interpreted if the meaning of the factors is already known (Gorsuch, 1974). However, with the DAPP-BQ dimensions found to be nearly orthogonal, the structure and the pattern matrices cannot be expected to depart strongly from each other.

personality disorder, as was demonstrated by the fact that the factor congruence coefficients calculated in relation to the factors observed in a general population sample of 939 subjects ranged from 0.94 to 0.99 (Livesley et al., 1998). Of course, these findings do again underscore the relevance and appropriateness of a dimensional model instead of a categorical model for the personality disorders.

In addition to the fact (see above) that a joint factor analysis of the DAPP-BQ and the NEO-PI yielded a five-factor solution with four factors highly loaded by the dimensions Neuroticism, Extraversion, Agreeableness, and Conscientiousness, the DAPP-BQ scales were also directly correlated with the FFM dimensions in a study by Jang & Livesley (1999). Applying in this case the NEO-Five Factor Inventory (NEO-FFI) developed by Costa & McCrae (1988), the correlations showed convincingly that Emotional Dysregulation (or rather its constituent dimensions) resembled Neuroticism, Dissocial low Agreeableness, Inhibition low Extraversion, and Compulsivity Conscientiousness.

Recognizing these and other (Livesley, Jang, Jackson, & Vernon, 1993) promising results obtained with the original (English language) version of the DAPP-BQ, we decided to translate this instrument in Dutch, and to conduct at least some preliminary research with this inventory. The investigations reported below address two fundamental issues: (a) the question of the reliability and factor structure of the Dutch DAPP-BQ; and (b) the issue of the relationship of the Dutch DAPP-BQ factors with normal personality as measured by the 4DPT constructed by van Kampen (1997).

METHOD

PARTICIPANTS AND PROCEDURE

Two groups of participants were used in this investigation. The first group consisted of 223 normal subjects (143 females, 73 males, and 7 subjects of unknown sex), aged 18 to 62 years, with a mean age of 40.30 years ($SD = 11.64$), that were randomly drawn from the patients file of a general practitioner in Alkmaar, a medium-sized town in The Netherlands. All subjects were asked in a letter, signed by their own general practitioner, to complete the Dutch translation of the DAPP-BQ (and another inventory, the Schizotypic Syndrome Questionnaire [SSQ]), about which we will not report in this study) and to return the DAPP-BQ (and the SSQ) in a post-paid envelope once finished this task. Originally, 800 subjects were approached by their family doctor, thus the response percentage is 27%. The second group consisted of 115 clinical psychology students (93 females, 20 males, and 2 students of unknown sex) with a mean age of 22.68 years ($SD = 2.96$, range 20 to 41), who participated in a clinical assessment course and were willing to complete the 4DPT and the translated version of the DAPP-BQ.

MEASURES

The DAPP-BQ is a 290-item, self-report device for the assessment of 18 lower-order and 4 higher-order dimensions of personality pathology. The 18

scales each consist of 16 statements that describe personal preferences and behaviors, except the scales for Self-Harm and Suspiciousness, which contain 12 and 14 items, respectively. In addition, eight items are included to measure social desirability. The coefficient α reliabilities of the 18 DAPP-BQ scales were found to range from 0.87 to 0.94 in a sample of 274 normal subjects and from 0.84 to 0.95 in a sample of 158 personality-disordered patients (Schroeder et al., 1992; Jang, Personal communication, April 12, 2000). The test-retest reliabilities over a 3-week period varied from 0.81 to 0.93 (Livesley et al., 1993). The items of the DAPP-BQ are rated on a 5-point Likert scale, with scores ranging from 1 (very unlike me) to 5 (very like me).

The 4DPT was developed by us in an attempt to identify the basic or major dimensions of normal personality, as seen from a clinical-theoretical perspective. In agreement with Eysenck's (1994) claim that a basic personality factor must form part of a general nomological network, but also criticizing his theory about P or Psychoticism (Van Kampen, 1996), we postulated four fundamental dimensions, namely S or Insensitivity, E or Extraversion, N or Neuroticism, and G or Orderliness, of which S and G took the place of Eysenck's P factor (Van Kampen, 1997). From a statistical point of view, much attention was paid on the invariance of the factors with respect to several sample parameters, including age and sex. Theoretically, this was substantiated by the criticisms of idiographically oriented researchers that the loadings obtained in factor analysis may only apply to people in general, but not necessarily to (subgroups of) individual persons (Lamiell, 1981). Because all coefficients of factor similarity were found to be greater than 0.90, the conclusion seems warranted that the dimensions S, E, N, and G, as measured by the 4DPT, are highly invariant. Therefore, the definition and meaning of these factors is almost identical for groups of people differing along the sample parameters investigated (Van Kampen, 1997). Furthermore, it could be established that the 4DPT provides an adequate nomothetic framework for the localization of almost all idiographic traits of people (Van Kampen, 2000). The 4DPT scales have been found to be highly reliable, with α coefficients ranging from 0.78 for S to 0.90 for N and stability coefficients ranging from 0.75 for G to 0.90 for E. In the context of the present investigation, it is of particular importance that the 4DPT dimensions S, E, N, and G were found to correlate with the NEO-PI factors Agreeableness (-0.44), Extraversion (0.76), Neuroticism (0.80), and Conscientiousness (0.69) (Van Kampen, 1997), leading to the expectation that the Dutch DAPP-BQ—if found to have the same factorial structure as the Canadian DAPP-BQ—may relate to the 4DPT in a similar way as previously demonstrated with respect to the NEO-PI. Nearly the same correlations were observed after relating the 4DPT to Goldberg's (1992) unipolar Big Five marker scales. So, even from a lexical perspective the 4DPT dimensions appear to be basic factors of personality.

STATISTICAL ANALYSIS

Cronbach's α coefficients for the 18 DAPP-BQ scales (in their original form) were calculated in the group of 223 subjects. Items found to correlate too

low with the scale in which they were embedded were deleted, with the criterion for this being a (corrected) item-total correlation lower than $r = 0.20$. For the modified scales (in this study considered as "definite"), α coefficients were also computed. Moreover, the means and standard deviations of the modified scales were calculated to obtain at least some preliminary norms for the Dutch DAPP-BQ. Second, principal components analyses of the Dutch DAPP-BQ scales followed by both oblimin and varimax rotation of the first four factors were conducted in the sample of 223 subjects, in two cases omitting the Self-Harm scale, which was found in Canada to be heavily skewed. Factor congruence coefficients will be presented to compare the Dutch factor loadings with the structure matrix loadings made available by Jang (see above). Although these loadings are still unpublished, we opted for them because the factor matrix presented by Livesley et al. (1998) contains only loadings of at least 0.40. In the student group, scores for these factors were estimated on the basis of the constants and coefficients found in regression analyses conducted in the GP sample, using the oblimin factors as dependent variables. Lastly, the estimated factor scores in the student sample were correlated with the 4DPT scales for the measurement of S, E, N, and G.

RESULTS

RELIABILITY AND PRELIMINARY NORMS

In Table 1, under $\alpha 1$, the Cronbach's α coefficients for the 18 DAPP-BQ scales (as originally defined by Livesley) are presented for the subjects in the sample of 223 GP patients. In the next column, the numbers of the items are listed that were found to correlate less than 0.20 with the scale to which they belong in the English-language version. It is notable that almost all items correlated well beyond this threshold value, with the average item-total correlation for the 18 scales varying from 0.38 to 0.74 ($M = 0.51$, $SD = 0.10$). Table 1, column $\alpha 2$ presents the α coefficients after having deleted the items whose correlations were less than 0.20. Altogether, eight items belonging to five DAPP-BQ scales had to be removed. The corrected scales are Stimulus Seeking, Callousness, and Intimacy Problems, each with 15 items; Restricted Expression with 14 items; and Oppositionality with 13 items. Coefficients of both the uncorrected and corrected Dutch scales are of a satisfactory level. Moreover, the α coefficients, although somewhat lower in the Dutch sample, do not depart substantially from the Canadian values in the last column that were made available by Jang (see above). In fact, the definite Dutch and Canadian values were found to correlate at 0.80. Although the number of discarded items appears to be small, three items, the numbers 83, 132, and 235, had to be removed from one scale, Oppositionality.

In Table 2, the means and standard deviations of the Dutch DAPP-BQ scales are shown for the total group of subjects and for the women and men separately. The last column in Table 2 indicates at which level of probability the means of the DAPP-BQ scales for women and men were found to differ

TABLE 1. Internal consistencies (Cronbach's alpha) for the 18 scales of the DAPP-BQ

Scale	$\alpha 1$	Items with r it-tot < 0.20	$\alpha 2$	Canadian α
Submissiveness	0.87	—	—	0.89
Cognitive Distortion	0.89	—	—	0.89
Identity Problems	0.91	—	—	0.94
Affective Lability	0.87	—	—	0.91
Stimulus Seeking	0.84	5	0.85	0.89
Compulsivity	0.85	—	—	0.88
Restricted Expression	0.80	56, 174	0.82	0.90
Callousness	0.78	9	0.79	0.87
Oppositionality	0.79	83, 132, 235	0.83	0.90
Intimacy Problems	0.78	196	0.79	0.88
Rejection	0.78	—	—	0.87
Anxiousness	0.91	—	—	0.94
Conduct Problems	0.85	—	—	0.87
Suspiciousness	0.86	—	—	0.89
Social Avoidance	0.91	—	—	0.93
Narcissism	0.88	—	—	0.91
Insecure Attachment	0.91	—	—	0.93
Self-Harm	0.94	—	—	0.92

Note. $\alpha 1$ = Dutch alpha values (no items discarded); $\alpha 2$ = Dutch alpha values (after discarding items with item-total scale correlations [r it-tot] < 0.20).

significantly after applying independent *t*-tests (and Levene's test to correct for inequality of scale variances). Women have higher scores on Submissiveness and Anxiousness and men score higher on Callousness, Rejection, and Conduct Problems. Similar (unpublished) results, especially those related to Callousness, Rejection, and Conduct Problems, have also been found in Canada (Jang, Personal communication, February 8, 2000). However, on other scales, using Canadian subjects, significant differences did also appear, with, in particular, males having higher scores on Stimulus Seeking and Restricted Expression. It seems likely that at least some of these additional differences observed in Canada can be explained by the use of much larger subsamples (581 females and 361 males). Age does not seem to have a profound influence on the scores of the Dutch DAPP-BQ. Only for three scales—Stimulus Seeking, Intimacy Problems, and Narcissism—were significant correlations observed and the highest of them was still very low ($r = -0.26$). In Canada, the correlations with age were also found not to depart strongly from zero, the highest correlation being $r = -0.35$ in a group of 930 subjects (Jang, Personal communication, February 8, 2000).

FACTOR STRUCTURE

To investigate the factor structure of the Dutch DAPP-BQ, four principal components analyses were conducted in the larger sample of 223 subjects. In two of these investigations, all 18 scales were analyzed, rotating the first four components by means of oblimin and varimax, respectively. Similar analyses were conducted in the two remaining investigations; in these anal-

TABLE 2. Means and Standard Deviations for the Dutch DAPP-BQ Scales

Scale	Total Dutch Sample		Females		Males		<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Submissiveness	37.07	10.76	38.80	10.94	33.44	9.29	< 0.001
Cognitive Distortion	28.82	11.06	29.34	12.14	28.18	9.03	—
Identity Problems	30.28	11.58	30.68	12.40	29.70	10.23	—
Affective Lability	39.25	11.59	40.07	12.13	37.23	10.26	—
Stimulus Seeking	35.46	10.55	34.86	10.69	36.63	10.22	—
Compulsivity	51.88	11.32	51.85	11.40	52.81	10.44	—
Restricted Expression	36.59	9.64	36.79	10.30	36.49	8.39	—
Callousness	29.00	8.71	27.05	7.82	32.70	9.00	< 0.001
Oppositionality	27.54	8.73	27.51	8.62	27.89	9.01	—
Intimacy Problems	31.27	8.95	31.73	8.77	30.38	8.59	—
Rejection	37.44	8.93	35.76	8.56	41.24	8.62	< 0.001
Anxiousness	36.90	13.52	38.27	14.22	34.14	11.70	< 0.05
Conduct Problems	24.58	8.75	21.99	6.71	29.61	10.15	< 0.001
Suspiciousness	26.86	8.97	26.23	9.47	28.42	7.87	—
Social Avoidance	33.38	12.49	34.34	12.35	31.29	12.28	—
Narcissism	36.20	11.40	36.01	11.02	36.24	11.56	—
Insecure Attachment	37.78	13.42	37.87	13.31	37.46	13.45	—
Self-Harm	15.54	8.21	16.08	9.09	14.77	6.64	—

Note. *p* = 2-tailed probability levels associated with significant differences in means between females and males.

yses the principal components were extracted after omitting the Self-Harm scale, for this scale was found to have a very low item endorsement rate (skewness = 2.72), which could have affected the factor structure. Moreover, the kurtosis statistic for this scale (6.83) departed also strongly from zero. The decision to retain four factors was always in agreement both with the number of eigenvalues greater than 1 and with the scree test. As the factors extracted in one analysis were found to correlate at least 0.93 with the factors extracted in one of the other analyses, the four dimensions can be considered highly invariant. It seems arbitrary which factor solution will be adopted. However, we decided to opt for the factor structure found after oblimin rotation and without including the Self-Harm scale for two reasons. Livesley himself seems to favor oblimin-rotated factors, which is apparent in Livesley et al.'s (1998) presentation of factor-analytic results obtained in a general population sample of 939 subjects. Second, although we have to compare the Dutch factor loadings with the (unpublished) structure matrix loadings made available by Jang instead of the published loadings of at least 0.40 (see above) presented by Livesley et al. (1998), it might be still of interest to inspect the latter loadings too. However, the factor saturations listed by Livesley and collaborators have been derived by conducting a principal components analysis over the DAPP-BQ scales without the scale for Self-Harm included.

In Table 3, columns OF1, OF2, OF3, and OF4, the Dutch structure matrix loadings are shown after oblimin rotation with Kaiser normalization of the first four components. The four factors explain 71.46% of the total variance. Furthermore, in Table 3, columns OC1, OC2, OC3, and OC4, the structure

TABLE 3. Oblimin–Rotated Principal Component Factor Loadings for the Scales of the DAPP–BQ in Canada and The Netherlands

Scale	Canadian Oblimin Factors				Dutch Oblimin Factors			
	OC1	OC2	OC3	OC4	OF1	OF2	OF3	OF4
Submissiveness	0.78	0.02	0.32	–0.08	0.80	0.14	–0.14	0.14
Cognitive Distortion	0.81	0.38	0.31	–0.05	0.83	0.37	0.00	–0.21
Identity Problems	0.83	0.28	0.50	–0.05	0.84	0.29	0.22	–0.04
Affective Lability	0.79	0.41	0.01	0.15	0.82	0.37	–0.19	0.09
Stimulus Seeking	0.20	0.73	–0.10	–0.30	0.49	0.57	0.37	–0.43
Compulsivity	0.05	–0.11	0.05	0.90	0.31	0.23	–0.24	0.78
Restricted Expression	0.42	0.11	0.82	–0.03	0.67	0.33	0.33	0.16
Callousness	0.39	0.80	0.31	–0.05	0.29	0.83	0.16	–0.01
Oppositionality	0.71	0.43	0.27	–0.42	0.78	0.45	–0.06	–0.17
Intimacy Problems	0.13	0.06	0.83	0.02	0.04	–0.03	0.86	–0.14
Rejection	0.20	0.80	–0.08	0.23	0.21	0.80	–0.27	0.23
Anxiousness	0.89	0.22	0.28	0.07	0.90	0.28	–0.15	0.14
Conduct Problems	0.25	0.74	0.11	–0.25	0.36	0.75	–0.13	–0.36
Suspiciousness	0.64	0.60	0.37	0.28	0.72	0.57	0.03	0.30
Social Avoidance	0.76	0.17	0.57	–0.00	0.82	0.23	0.16	0.12
Narcissism	0.65	0.58	–0.06	0.03	0.62	0.57	–0.38	–0.02
Insecure Attachment	0.75	0.30	–0.10	0.16	0.69	0.34	–0.35	0.25
Percentage Accounted Variance	41.0	13.4	9.0	7.6	44.7	11.3	8.8	6.7

Note. Loadings greater than or equal to 0.40 appear in boldface.

matrix loadings on the oblimin rotated factors are given as they were found by Jang, analyzing the 17 aforementioned scales of the DAPP-BQ in a general population sample of 942 subjects. Factor OF1 seems to be especially related to the dimensions Anxiousness, Identity Problems, Cognitive Distortion, Social Avoidance, and Affective Lability. Other scales that load highly on OF1 are Submissiveness and Oppositionality. Like its Canadian counterpart OC1, this factor appears ‘to represent unstable and reactive tendencies, dissatisfaction with the self and life experiences, and interpersonal problems’ (Livesley et al., 1998, p. 943). A similar interpretation also seems applicable to the first oblimin rotated factor presented by Livesley et al. (1998). As the congruence coefficient for OF1 compared with OC1 proved to be 0.98, we applied the same label—Emotional Dysregulation—as used by Livesley to the Dutch first oblimin factor. Factor OF2 is characterized in particular by loadings from Callousness, Rejection, and Conduct Problems, exactly as was observed in Canada. Somewhat smaller, but still substantial loadings are obtained for Stimulus Seeking, Suspiciousness, and Narcissism, which is also in agreement with what applies to OC2 or to the second oblimin factor presented by Livesley et al. (1998). Moreover, the coefficient of factor congruence with respect to OC2 appeared to be 0.97. Accordingly, the OF2 factor was also labelled Dissocial. If we compare the Dutch factor OF4 with the fourth Canadian oblimin factor OC4, the interpretation seems also straightforward. In fact, both factors are only characterized by high loadings from Compulsivity. A similar result was observed by Livesley et al. (1998). As the factor congruence coefficient for OF4 with respect to OC4 appeared to be 0.90, the Canadian label Compulsivity was considered by us to

be applicable to the Dutch factor. However, it is notable that both OC4 and Livesley et al.'s (1998) fourth oblimin factor are also characterized by a small negative loading of Oppositionality, whereas the loading of this scale on OF4 is almost zero. The comparison of OF3 with the oblimin-rotated factor OC3 found in Canada appears to be more problematic. The only dimension highly loading on the Dutch factor is Intimacy Problems, whereas Restricted Expression in particular, but to a lesser degree also Social Avoidance and Identity Problems load on the Canadian factor too. According to the data presented by Livesley et al. (1988), only Intimacy Problems and Restricted Expression load this factor. Although the Canadian results appear to be somewhat fluctuating, the only possibility to compare them directly with OF3 is to calculate the coefficient of factor congruence for OF3 and OC3. The value of this coefficient (0.58) falls short of suggesting a high or even fair level of similarity between the Dutch and Canadian factors. However, there seems to be a common element (the high loading of the Intimacy Problems scale), which suggests that the Dutch factor OF3 is not so much wholly different from the Canadian factor OC3 as that the Dutch factor is more narrowly defined. Hence, the Dutch factor OF3 was not labelled Inhibition but Intimacy Problems.

DAPP-BQ AND 4DPT RELATIONS

In investigating the correlations between the four higher-order dimensions of the Dutch DAPP-BQ, on the one hand, and the S, E, N, and G scales of the 4DPT, on the other hand, the student sample was considered, with respect to personality, to form part of the larger sample of 223 subjects. That is, the scores on the DAPP-BQ factors in the student sample were estimated on the basis of regression equations computed in the sample of 223 subjects for the variables OF1, OF2, OF3, and OF4, respectively. However, to learn whether the correlations between the two inventories seem to be dependable, Cronbach's α coefficients for the scales of the DAPP-BQ and the scales of the 4DPT were calculated. These figures turned out to be wholly satisfactory, with α coefficients ranging from 0.78 to 0.92 for the 18 DAPP-BQ scales and from 0.75 to 0.87 for the scales of the 4DPT. Table 4 shows the correlations of the oblimin-rotated DAPP-BQ factors with the S, E, N, and G scales. The correlations and multiple correlations (R) of the 4DPT dimensions with the individual DAPP-BQ scales—the latter scales constituting the dependent variables—are also included in Table 4. It seems needless to say that the correlations in Table 4, even with respect to the Dutch factor Intimacy Problems (OF3), are very much as expected. However, the Dutch Intimacy Problems scale itself does not appear to be substantially correlated with (low) Extraversion, whereas the scales for Restricted Expression and Social Avoidance—originally found to be both related with both Inhibition and low Extraversion—are still observed in the Dutch sample to correlate negatively with 4DPT-E. Finally, we may conclude from Table 4 that the R values with respect to the 18 DAPP-BQ scales range from 0.38 to 0.82, with a mean value of $R = 0.59$. If we compare the individual R values in Table 4 with the values obtained by Schroeder et al. (1992) for 16 of 18 DAPP-BQ scales (see

TABLE 4. Correlations and Multiple Correlations Between the 4DPT and the Factors and Scales of the Dutch DAPP-BQ

Factor/Scale	S	E	N	G	R
OF1 Emotional Dysregulation	0.18	-0.30**	0.74**	0.15	0.78
OF2 Dissocial	0.68**	0.28**	-0.01	0.06	0.71
OF3 Intimacy Problems	0.13	-0.43**	-0.14	-0.11	0.55
OF4 Compulsivity	-0.08	-0.22*	0.13	0.73**	0.74
Submissiveness	-0.11	-0.25**	0.50**	0.28**	0.55
Cognitive Distortion	0.27**	0.01	0.45**	0.02	0.50
Identity Problems	0.20*	-0.35**	0.64**	0.08	0.72
Affective Lability	0.42**	-0.03	0.62**	0.12	0.71
Stimulus Seeking	0.29**	0.37**	-0.10	-0.33**	0.52
Compulsivity	0.07	-0.09	0.23*	0.82**	0.82
Restricted Expression	0.14	-0.42**	0.17	0.10	0.48
Callousness	0.61**	0.15	0.08	0.12	0.62
Oppositionality	0.27**	-0.16	0.57**	-0.09	0.66
Intimacy Problems	0.26**	-0.18	-0.07	-0.09	0.38
Rejection	0.56**	0.28**	0.04	0.17	0.63
Anxiousness	0.06	-0.27**	0.79**	0.22*	0.79
Conduct Problems	0.46**	0.13	0.07	-0.07	0.47
Suspiciousness	0.37**	-0.14	0.30**	0.27**	0.51
Social Avoidance	0.03	-0.64**	0.52**	0.25*	0.76
Narcissism	0.34**	0.17	0.48**	0.18	0.62
Insecure Attachment	0.01	0.09	0.35**	0.21*	0.42
Self-Harm	-0.02	-0.13	0.47**	0.08	0.48

Note. In the regression analyses the 4DPT scales were entered as a block of predictors. * $p < 0.05$; ** $p < 0.01$.

Introduction), both sets of values appear to be relatively similar. In fact, both sets were found to correlate 0.76 ($p < 0.001$).

DISCUSSION

It seems clear from the aforementioned results that the original and the Dutch-language version of the DAPP-BQ have much in common, both in terms of Cronbach's α reliabilities of the 18 scales of this instrument and with respect to the factors observed after a principal components analysis of these scales, followed by oblimin rotation of the first four factors. Moreover, the correlations of the scales and factors of the DAPP-BQ with the 4DPT dimensions Insensitivity, Extraversion, Neuroticism, and Orderliness—previously found to be more or less similar to the FFM dimensions (low) Agreeableness, Extraversion, Neuroticism, and Conscientiousness (Van Kampen, 1997)—are very much as expected. Still, if we compare the results obtained with the Dutch DAPP-BQ and its Canadian counterpart, some discrepancies may be noted.

First, eight items in the Dutch translation, belonging to five DAPP-BQ scales, had to be removed because they were found to correlate too low with the total scales in which they were embedded originally. Although this number does not appear to be large, three of these items (83, 132, and 235) be-

long to the same scale as originally constructed for the measurement of Oppositionality. Inspection of the contents of these items might suggest that the items 83 (I am not very well organized) and 132 (I rarely set objectives for myself) do not only refer to a disorganized behavioral pattern that, in our view, rather surprisingly, was found by Livesley et al. (1992, p. 43) to be a facet of Oppositionality, but also refer to a lack of obsessional tendencies. Hence, the deletion of these two items in the Dutch Oppositionality scale seems to be consistent with the almost zero loading of this scale on the Compulsivity factor OF4, compared with the higher negative saturation (-0.42) of the original 16-item scale on OC4. The conclusion seems at least certain that the Canadian and Dutch Oppositionality scales have a somewhat different meaning, with the Dutch scale more exclusively related to what appears the most central feature of a passive-aggressive behavioral pattern, yielding a tendency to be negative and oppositional.

For a more serious point of divergence, one of the four oblimin rotated factors in the Dutch sample (OF3 or Intimacy Problems) was found to depart from the Inhibition factor (OC3), which resulted from a principal components analysis of the Canadian DAPP-BQ scales. Indeed, the coefficient of factor congruence—with values for the three remaining dimensions ranging from 0.90 to 0.98 and, therefore, indicating at least a substantial degree of similarity between the Canadian and Dutch factors—was found in this case to be only 0.58. However, it can be stated that the Inhibition factor is not so much completely different from the Dutch dimension OF3 as that this factor is broader in content. In this respect, it is notable that the three DAPP-BQ scales—Social Avoidance, Restricted Expression, and Identity Problems—that are particularly involved in the broader content of OC3 were found in our investigation to load exclusively on Emotional Dysregulation. Moreover, as at least two of these scales (Social Avoidance and Restricted Expression) also appeared in our student sample to correlate rather substantially with (low) Extraversion, whereas the scale for Intimacy Problems did not, we may, of course, expect that the Canadian factor Inhibition, compared with the Dutch Intimacy Problems factor, must also be found to be more heavily weighted with low Extraversion. Although no data are available to test directly this prediction, the (negative) correlations listed by Jang and Livesley (1999) of the DAPP-BQ scales Social Avoidance, Restricted Expression, and Identity Problems with NEO-FFI Extraversion do indeed appear to be somewhat higher (-0.55, -0.44, and -0.47, respectively) than the correlation between the Intimacy Problems scale and (low) Extraversion (-0.31). Taken together, we may, conclude that the Dutch Intimacy Problems factor, just as the original factor Inhibition, measures the degree to which an individual is uncomfortable with close, intimate, romantic, and sexual relationships, but without fully assessing those features that seem to be the possible consequences of these tendencies that do appear to be more strongly related to Introversion. However, the OF3 factor itself was still found to correlate ($r = -0.43$) with low Extraversion.

Although the correlations between the Dutch DAPP-BQ scales and factors and the scales of the 4DPT resemble those found between the original DAPP-BQ and the NEO-PI, two remarks must be made. First, we do not consider the 4DPT to reflect the total domain of fundamental and higher-order

dimensions of normal personality. More specifically, we have recently added to the 4DPT (changing its name in 5DPT) a theory-based and highly invariant scale for the measurement of a fifth major dimension, Absorption, which might replace the FFM dimension Openness to Experience (Van Kampen, 2002). Although the latter dimension was not found by Schroeder et al. (p. 52, 1992) to play a major role in explicating personality disorders, the literature concerning this issue seems divided. Widiger and Costa (p. 84, 1994), for instance, would be surprised if Openness to Experience would not have any consequential implications for maladaptive functioning. These authors point to a study by Wiggins and Pincus (1989) in which extreme Openness to Experience was observed to be related to schizotypal personality disorder. It seems not clear how to explain these opposite findings, although one might argue that, perhaps, some facets of Openness are involved in the unusual ideas and perceptions of schizotypic persons, whereas other facets are not (Widiger & Costa, 1994). It seems to us not unlikely that the 5DPT Absorption scale will show a more consistent relationship with DAPP-BQ Cognitive Distortion, as the Absorption scale was found to correlate both with Openness to Experience ($r = 0.59$) and with three of our SSQ scales—Perceptual Disturbances ($r = 0.39$), Autistic Fantasies ($r = 0.47$), and Magical Ideation and Ideas of Reference ($r = 0.46$)—that were specifically constructed to assess the positive symptomatology of schizotypy (Van Kampen, 2002). Of course, the 5DPT Absorption scale may also be found to correlate, positively or negatively, with other scales of the DAPP-BQ (p. 30, Widiger & Frances, 1994).

Our second remark has a bearing on the finding that not all individual correlations and multiple correlations listed in Table 4 are apparently of such a level as to substantiate the conclusion that the DAPP-BQ personality disorder features can be easily accommodated by the normal personality dimensions of the 4DPT. Indeed, as was noted above, multiple correlations of a similar, sometimes relatively small, size were also observed in Schroeder et al.'s (1994) study in which the NEO-PI was used, with the correlation between both sets of R values amounting to $r = 0.76$. Taking into account the multiple correlations reported both by Schroeder et al. (1994) and by us, the DAPP-BQ dimensions Conduct Problems, Insecure Attachment, Intimacy Problems, and Restricted Expression seem to be insufficiently explained by the normal personality dimensions of the NEO-PI or the 4DPT. However, as Schroeder et al. (p. 52, 1992) rightly comment, "The Intimacy Problems and Conduct Problems scales have largely behavioral content, which may help to explain their relatively low multiple correlations; the NEO-PI scales do not measure this content. The Restricted Expression and Insecure Attachment scales describe problems with interpersonal relationships; again, this content is not strongly represented in the NEO-PI." A similar explanation seems to hold with respect to the 4DPT. In addition, the expectation of Schroeder et al. (p. 126, 1994) that Self-Harm and Cognitive Distortion would probably also be found to correlate rather low with normal personality is corroborated in the present study, with the multiple correlations for these scales being 0.48 and 0.50, respectively. Restricting ourselves to the R values obtained in the present investigation, we may conclude that approximately half of the Dutch DAPP-BQ scales—9 of the 18 scales, if we start from a minimum R

value of 0.60 — seem to be rather easily accommodated by the four basic 4DPT dimensions of normal personality, whereas there are often good reasons that account for the relatively low *R* values that are observed in the case of the remaining DAPP-BQ scales.

Given the results obtained in this study, the Dutch-language version of the DAPP-BQ seems to be at least promising. If the DAPP-BQ is used for clinical description, diagnosis, or treatment planning, the emphasis must lie on the 18 lower-order dimensions, rather than on the first 2 higher-order constructs (Emotional Dysregulation and Dissocial) that are simply too broad to be of much help (Harkness, 1992; Livesley & Jang, 2000). However, it should be noted that the 18 dimensions of the DAPP-BQ show very little direct similarity to DSM-III-R or DSM-IV diagnostic categories. As Livesley et al. (p. 438, 1992) comment, this finding is in agreement with other factor-analytic studies (Hyler, Lyons, Rieder, Young, Williams, & Spitzer, 1990) and can be easily explained by the fact that the DSM categories differ considerably in conceptual breadth, thus crossing the borders between the levels demonstrated in factor-analytic investigations.

Of at least more theoretical interest is Livesley & Jang's (2000) assertion that the DAPP-BQ dimensional structure in itself, or any other scheme to describe individual differences in clinically important traits, can by no means considered to offer a solution to the problem of establishing a meaningful and valid classification of personality disorders. As these authors point out, the presence of an extreme score on any personality trait is not necessarily pathological. What is pathological goes beyond a conception of merely statistical deviance or normality. According to Livesley & Jang (2000), what we need is a systematic definition of personality disorder to give us a clear understanding of the ways in which normal and disordered personality are functionally different. In the case of a personality disorder, one must search for criteria that are associated with failures to attain certain life tasks or long-term strategic goals that are both universal or relatively culture-free and basic to adaptation. On the basis of these considerations, but also noting similarities with clinical analyses of personality dysfunction, Livesley et al. (p. 12, 1994) suggest that a personality disorder may be defined as "the failure to attain the universal tasks of identity, attachment, intimacy, or affiliation." Besides "the failure to establish stable and integrated representations of self and others" (identity problems) and "maladaptive interpersonal functioning as indicated by the failure (1) to develop the capacity for intimacy, (2) to function adaptively as an attachment figure, and (3) to establish affiliative relationships," "maladaptive societal functioning as indicated by deficit prosocial behavior, and inability to form cooperative relationships" was subsequently added to this list of adaptive failures (Livesley & Jang, 2000, p. 143). Because it seems possible to Livesley and Jang (2000) to develop reliable self-report scales "even for concepts that are apparently as nebulous as an unstable sense of self" (p. 143), any established failure to achieve adaptive solutions to life tasks would in principle be sufficient to state a diagnosis of personality disorder. However, as other mental disorders may also give rise to such failures, the authors point out that a proper definition of a personality disorder must necessarily include the reservation that the adap-

tive failure is due to the processes involved in maladaptive personality functioning.

Notwithstanding all efforts to present diagnostic criteria that are distinct from traits, the criteria mentioned above seem to be very much related to the DAPP-BQ dimensions themselves. Indeed, in Livesley and Jang's (2000) most recent list of basic personality disorder traits, only 16 DAPP-BQ dimensions are mentioned, omitting the dimensions Identity Problems and Self-Harm. The authors comment (Livesley & Jang, 2000, p. 146): "This list does not include those aspects of personality incorporated in the conception of personality disorder as the failure to achieve life tasks because that content would be captured in the criteria to diagnose personality disorder." It seems to us that other DAPP-BQ dimensions, such as Intimacy Problems and Insecure Attachment, might have been discarded as well, if we follow this line of reasoning.

Furthermore, and even without referring to Livesley's list of adaptive failures, we may question the assumption that there are general diagnostic criteria for the class of personality disorders that are definitely independent from the positions on the dimensions that have been found to delineate these disorders. In this respect, it seems especially relevant to emphasize the well-known difficulties encountered in former attempts to present a sound definition of such terms as disorder, illness, or disease (Kendell, 1975; Spitzer & Endicott, 1978). Although not often recognized, these terms are essentially evaluative concepts whose referents change in idiosyncratic ways with time and place. When behavior is characterized in terms of sickness and health, there is always an implicit assumption about how reality ought to be. However, how something ought to be or what is wanted or unwanted by a person or by other people can never be inferred directly from the phenomena studied. Hence, if we want to retain such terms like disorder and illness, a trait-dependent definition might be preferred. Such a definition seems implicit in Widiger & Costa's (pp. 84, 85, 1994) use of the concept of maladaptivity. According to these authors, "maladaptivity does appear to be related to the extent to which one is introverted, extraverted, agreeable, or antagonistic," although "each dimension of personality will not have the same degree of implications for maladaptivity" and the relationship of a certain dimension with maladaptivity "might be more unipolar than bipolar," meaning, for instance, that high levels of Neuroticism are usually found to be more maladaptive than low levels (Widiger & Costa, 1994, pp.84-85). Indeed, as we have seen in the study by Nakao et al. (1992), significant impairments in social, occupational, or other important areas of functioning were found to be related to (an indirect measure of) trait extremity. Although these findings are not in agreement with Livesley's conviction that a personality disorder diagnosis can only be made after securing ourselves that certain trait-independent criteria are met, we are certainly not forced to conclude that the type of maladaptive functioning that is described by Widiger & Costa (1994) must now be regarded simply not of importance in clinical assessment and diagnosis. Their suggestion, for instance, to develop specific impairment scales (modeled after DSM-III-R and DSM-IV Axis IV and Axis V) to assess maladaptive and adaptive functioning, seems to us most wel-

come. Furthermore, the adaptivity or maladaptivity of a trait is always a function of the context or situation in which a person behaves, a phenomenon sometimes denoted situational maladaptivity (Widiger & Costa, 1994). Also, this type of trait-dependent maladaptivity might be interesting to measure. It seems safe to conclude that the DAPP-BQ itself suffices as a measurement device for the assessment of personality pathology but that other instruments may be used to assess the adaptive failures that are often associated with it.

REFERENCES

- American Psychiatric Association (1980). *DSM-III: Diagnostic and statistical manual of mental disorders* (3rd Ed.). Washington, DC: Author.
- American Psychiatric Association (1987). *DSM-III-R: Diagnostic and statistical manual of mental disorders* (Rev. 3rd Ed.). Washington, DC: Author.
- American Psychiatric Association (1994). *DSM-IV: Diagnostic and statistical manual of mental disorders* (4th Ed.). Washington, DC: Author.
- Austin, E. J., & Deary, I. J. (2000). The 'four As': A common framework for normal and abnormal personality? *Personality and Individual Differences*, 28, 977-995.
- Barrett, P., & Kline, P. (1981). The observation to variable ratio in factor analysis. *Journal of Personality and Group Behaviour*, 1, 23-33.
- Clark, L. A. (1993). *Manual for the schedule for nonadaptive and adaptive personality*. Minneapolis, MN: University of Minnesota Press.
- Clark, L. A., Livesley, W. J., Schroeder, M. L., & Irish, S. L. (1996). Convergence of two systems for assessing specific traits of personality disorder. *Psychological Assessment*, 8, 294-303.
- Costa, P. T., Jr., & McCrae, R. R. (1985). *The NEO personality inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., Jr., & McCrae, R. R. (1988). *NEO-PI/FFI manual supplement*. Odessa, FL: Psychological Assessment Resources.
- De Zeeuw, J. (1978). *Algemene Psychodiagnostiek*, (Vol. 2) Amsterdam: Swets and Zeitlinger.
- Deary, I. J., Peter, A., Austin, E. J., & Gibson, G. J. (1998). Personality traits and personality disorders. *British Journal of Psychology*, 89, 647-662.
- Eysenck, H. J. (1987). The definition of personality disorders and the criteria appropriate to their definition. *Journal of Personality Disorders*, 1, 211-219.
- Eysenck, H. J. (1994). The importance of theory in the taxonomy of personality. In B. De Raad, W. K. B. Hofstee, & G. L. Van Heck (Eds.), *Personality psychology in Europe* (Vol. 5, pp. 6-13). Tilburg, The Netherlands: Tilburg University Press.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.
- Gorsuch, R. L. (1974). *Factor analysis*. Philadelphia: Saunders.
- Harkness, A. R. (1992). Fundamental topics in the personality disorders: Candidate trait dimensions from lower regions of the hierarchy. *Psychological Assessment*, 4, 251-259.
- Harkness, A. R., & McNulty, J. L. (1994). The Personality Psychopathology Five (PSY-5): Issue from the pages of a diagnostic manual instead of a dictionary. In S. Strack, & M. Lorr (Eds.), *Differentiating normal and abnormal personality*, (pp. 291-315). New York: Springer.
- Haven, S., & Ten Berge, J. M. F. (1977). Tucker's coefficient of congruence as a measure of factorial invariance: An empirical study. *Heymans Bulletin, HB*

- 77-290 EX. Groningen, The Netherlands: Psychologische Instituten Heymans.
- Hyer, S. E., Lyons, M., Rieder, R. O., Young, L., Williams, J. B., & Spitzer, R. L. (1990). The factor structure of self-report DSM-III Axis II symptoms and their relationship to clinicians' ratings. *American Journal of Psychiatry*, 147, 751-757.
- Jang, K. L., & Livesley, W. J. (1999). Why do measures of normal and disordered personality correlate? A study of genetic comorbidity. *Journal of Personality Disorders*, 13, 10-17.
- Kendell, R. E. (1975). *The role of diagnosis in psychiatry*. Oxford, UK: Blackwell.
- Lamiell, J. T. (1981). Toward an idiographic psychology of personality. *American Psychologist*, 36, 276-289.
- Livesley, W. J. (1986). Trait and behavioral prototypes of personality disorder. *American Journal of Psychiatry*, 143, 728-732.
- Livesley, W. J. (1987). A systematic approach to the delineation of personality disorders. *American Journal of Psychiatry*, 144, 772-777.
- Livesley, W. J., Jackson, D. N., & Schroeder, M. L. (1989). A study of the factorial structure of personality pathology. *Journal of Personality Disorders*, 3, 292-306.
- Livesley, W. J., Jackson, D. N., & Schroeder, M. L. (1992). Factorial structure of traits delineating personality disorders in clinical and general population samples. *Journal of Abnormal Psychology*, 101, 432-440.
- Livesley, W. J., & Jang, K. L. (2000). Toward an empirically based classification of personality disorder. *Journal of Personality Disorders*, 14, 137-151.
- Livesley, W. J., Jang, K. L., Jackson, D. N., & Vernon, P. A. (1993). Genetic and environmental contributions to dimensions of personality disorder. *American Journal of Psychiatry*, 150, 1826-1831.
- Livesley, W. J., Jang, K. L., & Vernon, P. A. (1998). Phenotypic and genetic structure of traits delineating personality disorder. *Archives of General Psychiatry*, 55, 941-948.
- Livesley, W. J., Schroeder, M. L., Jackson, D. N., & Jang, K. L. (1994). Categorical distinctions in the study of personality disorder: Implications for classification. *Journal of Abnormal Psychology*, 103, 6-17.
- Meehl, P. E. (1994). Bootstraps taxometrics: Solving the classification problem in psychopathology. *American Psychologist*, 50, 266-275.
- Nakao, K., Gunderson, J. D., Phillips, K. A., Tanaka, N., Yorifuji, K., Takaishi, J., & Nashimura, N. (1992). Functional impairment in personality disorders. *Journal of Personality Disorders*, 6, 24-33.
- Presly, A. S., & Walton, H. J. (1973). Dimensions of abnormal personality. *British Journal of Psychiatry*, 159, 463-471.
- Schroeder, M. L., Wormworth, J. A., & Livesley, W. J. (1992). Dimensions of personality disorder and their relationships to the Big Five dimensions of personality. *Psychological Assessment*, 4, 47-53.
- Schroeder, M. L., Wormworth, J. A., & Livesley, W. J. (1994). Dimensions of personality disorder and the five-factor model of personality. In P. T. Costa, Jr., & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality*, (pp. 117-127). Washington DC: American Psychological Association.
- Spitzer, R. L., & Endicott, J. (1978). Medical and mental disorder: proposed definition and criteria. In R. L. Spitzer, & D. F. Klein (Eds.), *Critical issues in psychiatric diagnosis*, (pp. 15-39). New York: Raven Press.
- Trull, T. J. (1992). DSM-III-R personality disorders and the five-factor model of personality: An empirical comparison. *Journal of Abnormal Psychology*, 101, 553-560.
- Trull, T. J., Ueda, J. D., Costa, P. T., Jr., & McCrae, R. R. (1995). Comparison of the MMPI-2 Personality Psychopathology Five (PSY-5), the NEO-PI, and the NEO-PI-R. *Psychological Assessment*, 7, 508-516.
- Tucker, L. R. (1951). A method for synthesis of factor analysis studies. Personnel Research Section Report No. 984, De-

- partment of the Army, Washington, DC.
- Tyrer, P., & Alexander, J. (1979). Classification of personality disorder. *British Journal of Psychiatry*, 135, 163-167.
- Van Kampen, D. (1996). The theory behind psychoticism: A reply to Eysenck. *European Journal of Personality*, 10, 57-60.
- Van Kampen, D. (1997). Orderliness as a major dimension of personality: From 3DPT to 4DPT. *European Journal of Personality*, 11, 211-242.
- Van Kampen, D. (2000). Idiographic complexity and the common personality dimensions Insensitivity, Extraversion, Neuroticism, and Orderliness. *European Journal of Personality*, 14, 217-243.
- Van Kampen, D. (2002). Basic personality dimensions from a clinical/theoretical perspective: The 5DPT factors A, G, E, N, and S (manuscript in preparation).
- Widiger, T. A., & Costa, P. T., Jr. (1994). Personality and personality disorders. *Journal of Abnormal Psychology*, 103, 78-91.
- Widiger, T. A. & Frances, A. J. (1994). Toward a dimensional model for the personality disorders. In P. T. Costa, Jr. & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality*, (pp. 19-39). Washington, DC: American Psychological Association.
- Widiger, T. A., Frances, A. J., Harris, M., Jacobsberg, L., Fyer, M., & Manning, D. (1991). Comorbidity among axis II disorders. In: Oldham, J. (Ed.), *Personality disorders: New perspectives on diagnostic validity* (pp. 163-194). Washington, DC: American Psychiatric Press.
- Widiger, T. A., Trull, T. J., Clarkin, J. F., Sanderson, C., & Costa, P. T., Jr. (1994). A description of the DSM-III-R and DSM-IV personality disorders with the five-factor model of personality. In P. T. Costa, Jr., & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (pp. 41-56). Washington, DC: American Psychological Association.
- Widiger, T. A., Verheul, R., & Van den Brink, W. (1999). Personality and psychopathology. In L. A. Pervin, & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 347-366). New York: Guilford.
- Wiggins, J. S. & Pincus, A. L. (1989). Conceptions of personality disorders and dimensions of personality. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 1, 305-316.
- Zimmerman, M., & Coryell, W. H. (1990). DSM-III personality disorder dimensions. *Journal of Nervous and Mental Disease*, 178, 686-692.